WHAT IS CLAIMED IS:

1. A data communication method for exchanging messages, under a system environment constituted of a plurality of objects which executes message communication, between a complex object constituted of a plurality of objects having execution seriality and an independent object external to said complex object, said data communication method comprising the steps of:

(a) temporarily storing one or more messages directed from an object within said complex object to said independent object external to said complex object; and

(b) sending the one or more stored messages to said independent object in a single operation when said complex object and said independent object enter a predetermined relationship.

2. A data communication method according to Claim 1, wherein said complex object is constituted of a plurality of objects which can be invoked in a manner equivalent to a function call which does not cause context switch.

3. A data communication method according to Claim 1, further comprising the step of (c) creating a history of message communication by the object within said complex

object,

wherein said step (b) determines whether said complex object and said independent object have entered said predetermined relationship based on said history of message communication.

4. A data communication method according to Claim 1, further comprising the step of (c) creating a history of message communication by the object within said complex object,

wherein said step (b) sends the one or more stored messages in a single operation if said history of message communication is indicative of a message communication from a different execution thread when the object within said complex object exits execution.

5. A data communication method according to Claim 1, wherein said step (a) controls message storing in accordance with a relationship between said complex object and said independent object.

6. A data communication method according to Claim 1, wherein said step (a) controls message storing in accordance with the status of said independent object.

7. A data communication method according to Claim 1, wherein said step (a) controls message storing on a destination-by-destination basis if the one or more stored messages are directed from the object within said complex object to a plurality of independent objects external to said complex object.

8. A data communication method according to Claim 1, further comprising the step of (d) determining whether to store or immediately send the one or more messages in accordance with a relationship between said complex object which sends the one or more messages and said independent object which receives the one or more messages, with respect to scheduling priority level and interrupt priority level of the respective execution threads thereof.

9. A data communication method according to Claim 1, wherein said system constituted of a plurality of objects is an object-oriented operating system constituted of a plurality of concurrent objects.

10. A data communication method according to Claim 1, wherein said system constituted of a plurality of objects is an application program or a device driver constituted of a plurality of concurrent objects.

11. A data communication apparatus for exchanging messages, under a system environment constituted of a plurality of objects which executes message communication, between a complex object constituted of a plurality of objects having execution seriality and an independent object external to said complex object, said data communication apparatus comprising:

(a) means for temporarily storing one or more messages directed from an object within said complex object to said independent object external to said complex object; and

(b) means for sending the one or more stored messages to said independent object in a single operation when said complex object and said independent object enter a predetermined relationship.

12. A data communication apparatus according to Claim 11, wherein said complex object is constituted of a plurality of objects which can be invoked in a manner equivalent to a function call which does not cause context switch.

13. A data communication apparatus according to Claim 11, further comprising (c) means for creating a history of message communication by the object within said complex

object,

wherein said means (b) determines whether said complex object and said independent object have entered said predetermined relationship based on said history of message communication.

14. A data communication apparatus according to Claim 11, further comprising (c) means for creating a history of message communication by the object within said complex object,

wherein said means (b) sends the one or more stored messages in a single operation if said history of message communication is indicative of a message communication from a different execution thread when the object within said complex object exits execution.

15. A data communication apparatus according to Claim 11, wherein said means (a) controls message storing in accordance with a relationship between said complex object and said independent object.

16. A data communication apparatus according to Claim 11, wherein said means (a) controls message storing in accordance with the status of said independent object.

17. A data communication apparatus according to Claim 11, wherein said means (a) controls message storing on a destination-by-destination basis if the one or more stored messages are directed from the object within said complex object to a plurality of independent objects external to said complex object.

18. A data communication apparatus according to Claim 11, further comprising (d) means for determining whether to store or immediately send the one or more stored messages in accordance with a relationship between said complex object which sends the one or more messages and said independent object which receives the one or more stored messages, with respect to scheduling priority level and interrupt priority level of the respective execution threads thereof.

19. A data communication apparatus according to Claim 11, wherein said system constituted of a plurality of objects is an object-oriented operating system constituted of a plurality of concurrent objects.

20. A data communication apparatus according to Claim 11, wherein said system constituted of a plurality of objects is an application program or a device driver constituted of a plurality of concurrent objects.

21. A computer-readable storage medium storing a computer program for exchanging messages, under a system environment constituted of a plurality of objects which executes message communication, between a complex object constituted of a plurality of objects having an execution seriality and an independent object external to said complex object, said computer program comprising the steps of:

(a) temporarily storing one or more messages directed from an object within said complex object to said independent object external to said complex object; and

(b) sending the one or more stored messages to said independent object in a single operation when said complex object and said independent object enter a predetermined relationship.